

Report Date: 10 Feb 2015

Summary Report for Individual Task
091-94R-1801
Repair the Automated Flight Control System (AFCS) Test Set
Status: Approved

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD7 - This product/publication has been reviewed by the product developers in coordination with the 59th Ord foreign disclosure authority. This product is NOT releasable to students from foreign countries.

Condition: In an operational environment, a work order for a Non-Mission Capable Advanced Flight Control System (AFCS) Test Set has been submitted to your shop. Your supervisor has assigned the work order to you. At your workstation you have the following items: AFCS control panel; AFCS Bench Test Set 145G0008-1; Digital Multimeter, AN/PSM-45A; Tool Kit,TK-105/(*)G; Contact Insertion/Removal Tool M83723-31-20; DA Form 5988-E, Equipment Inspection and Maintenance Worksheet; DA Form 5990-E, Maintenance Request, DA Pam 738-751, Functional Users Manual for the Army Maintenance Management System Aviation; TM 1-1520-240-23&P; TM 55-4920-430-13; TM 55-4920-430-30&P; TB 43-0127, Maintenance and Repair of Printed Circuit Boards and Printed Wiring Assemblies. This task should not be trained in MOPP 4.

Standard: Restore the AFCS Test Set to an operational status per TM 55-4920-430-13 and TM 55-4920-430-30&P. Complete DA Form 5990-E per DA Pam 738-751 without error.

Special Condition: None

Safety Risk: Low

MOPP 4: Never

Task Statements

Cue: Your supervisor has directed you to troubleshoot and repair the Non-Mission Capable AFCS Test Set.

DANGER

None

WARNING

HIGH VOLTAGE is used in this equipment. DEATH ON CONTACT or SEVERE INJURY can result if personnel fail to observe safety precautions.

Learn the equipment areas containing high voltage. Before working inside this equipment, turn off the equipment and disconnect all power at the source. Be careful not to touch high voltage connections when performing maintenance on this equipment.

CAUTION

During troubleshooting, observe the following precautions and procedures.

(1) Voltage measurements. This equipment has transistor and microcircuits. When you measure voltage, use tape or plastic sleeving (spaghetti) to insulate the entire test prod, except for the extreme tip. A momentary short can ruin a transistor or microcircuit. Use the same or equivalent digital multimeter specified in para 4-2.

(2) Resistance Measurements. Perform resistance and continuity checks with all electrical power off.

(3) When the test set is disconnected from external test connections, all grounds in the test set are not at the same potential. Chassis ground is at receptacle pin J7-B. DC common, logic ground, and AC signal ground are at TB1-3. AC neutral is at TB2-7.

(4) Use a card extender, where necessary, for making test measurements at card receptacles.

Remarks: None

Notes: TM 55-4920-430-13 is used for all paragraph references in task steps unless otherwise specified.

Performance Steps

1. Complete appropriate blocks on DA Form 5990-E per DA Pam 738-751.
2. Perform Visual inspection on equipment.
3. Obtain required tools, test equipment and references.
4. Perform operational Checks(s).
Note: Skip to Performance Step 10 if equipment passes operational check.
5. Perform troubleshooting procedures.
6. Identify the defective component(s).
7. Replace/repair defective component (s).
8. Perform operational Check(s) to verify proper operation of UUT.
Note: If UUT fails operational check repeat step 5.
9. Tag part(s) and/or equipment with proper DOD material condition tag per DA Pam 738-751.
10. Complete appropriate blocks on DA Form 5990-E per DA PAM 738-751.
11. Notify supervisor upon completion of task.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: None

Evaluation Preparation: None

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Completed appropriate blocks on DA Form 5990-E per DA Pam 738-751.			
2. Performed Visual inspection on equipment.			
3. Obtained required tools, test equipment and references.			
4. Performed operational Check(s).			
5. Performed troubleshooting procedures.			
6. Identified defective component(s).			
7. Replaced/repaired defective component(s).			
8. Repeated operational Check(s) to verify proper operation of UUT.			
9. Tagged part(s) and/or equipment with proper DOD material condition tag per DA Pam 738-751.			
10. Completed appropriate blocks on DA Form 5990-E per DA PAM 738-751.			
11. Notified supervisor upon completion of task.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	DA FORM 5988-E	Equipment Inspection Maintenance Worksheet	No	No
	DA FORM 5990-E	Maintenance Request	No	No
	DA PAM 738-751	Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)	No	No
	TB 43-0127	MAINTENANCE AND REPAIR OF PRINTED CIRCUIT BOARDS AND PRINTED WIRING	Yes	No
	TM 1-1520-240-23&P	INTERACTIVE ELECTRONIC TECHNICAL MANUAL FIELD MAINTENANCE FOR HELICOPTER, CARGO TRANSPORT CH-47D INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (NSN 1520-01-088-3669) (THIS ITEM IS INCLUDED ON EM 0280)	No	No
	TM 55-4920-430-13	OPERATORS, AVIATION INTERMEDIATE MAINTENANCE AND ILLUSTRATED PARTS BREAKDOWN FOR TEST SET, BENCH ADVANCED FLIGHT CONTROL SYSTEM (AFCS), 145G0008-1 (NSN 4920-01-121-0602) (REPRINTED W/ BASIC INCL C1-2) (T	Yes	No
	TM 55-4920-430-30P	AVIATION INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST) FOR ADVANCED FLIGHT CONTROL SYSTEM (AFCS) BENCH TEST SET (NSN 4920-0	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. In a Operational Environment, it is the responsibility of the soldier and DA civilians to protect the environment from damage.

All operations must conform to the Army Environmental Program, TC 3-34.489 (The Soldier and the Environment), FM 3-100.4 (Environmental Consideration in Military Operations), and local, state, and federal environmental policies, the Clean Air Act (CAA), CAA amendments, National Ambient Air-Quality Standards (NAAQS), as well as Occupational Safety and Health Administration (OSHA), Hazard Communication Standard for Industry, 29 CFR, part 1910.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Incidental to Army operations and activities, all operations must provide for public safety, safe and healthful work places, procedures, and equipment. Observe all safety precautions when using lifting devices and handling heavy parts. Observe all safety and/or environmental precautions regarding electricity, radiation, radio frequency (RF), fuel, lubricants, high pressures, and refrigerants. Provide ventilation for exhaust fumes during equipment operation and use hearing protection when required in accordance with AR 385-10, (The Army Safety Program) the Clean Air Act (CAA), CAA amendments, National Ambient Air-Quality Standards (NAAQS), and the Occupational Safety and Health Administration (OSHA) Hazard Communication standard.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks : None